UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,818	08/19/2003	YI-CHEN CHANG	11260-US-PA	1817

31561·   7590   04/06/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI,   100
TAIWAN

EXAMINER
PERVAN, MICHAEL

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 January 2006_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 and 2_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 and 2_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 January 2006_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Koyama (US 2003/0030382) in view of Kane (US 6,229,508).

In regards to claim 1, Koyama (Figure 2A) discloses a method for driving a

current-driven Active Matrix Organic Light Emitting Diode (AMOLED) comprising,

updating a current value of a current source (the current is input from source line 1201)

to charge a capacitor (1207) of the AMOLED pixel (paragraph 100; a current flows

through transistor 1205 causing a voltage to be input and stored on capacitor 1207,

therefore a current source is charging a capacitor), turning on a charging path used by

the current source to charge the capacitor of the AMOLED pixel (paragraph 100;

transistors 1203 and 1204 are turned on and current flows through transistors 1205,

then a voltage is input and stored on capacitor 1207, therefore a charging path is turned

on), complete the charging of the capacitor (paragraph 100, lines 8-11; voltage is input

to capacitor 1207, therefore a voltage is stored and the charge is complete) and cutting

off the charging path used by the current source to charge the capacitor of the AMOLED

pixel (paragraph 100, lines 14-28; transistors 1203 and 1204 and the current flow stops

and transistor 1205 turns off, therefore a charging path is turned off).

Koyama does not disclose an initial stage of the turning on of the charging path used by the current source to charge the capacitor of the AMOLED pixel, providing a pre-charging signal to the current source to have the capacitor discharged.

Kane (Figures 3 and 4) discloses an initial stage (pre-charge phase) of the turning on of the charging path (by turning on transistor 330) used by the current source (Data, 360; V=IR, the data line has a resistance and there is a voltage applied so therefore there is a current being applied to the capacitor) to charge the capacitor (302) of the AMOLED pixel (col. 4, lines 31-34), providing a pre-charging signal (pre-charge phase) to the current source to have the capacitor (302) discharged (col. 4, lines 31-34 and lines 54-56; the pre-charge pulse causes a charge to be stored at Node A, then Data is written to the pixel of the previous row, which would then cause the capacitor to discharge).

It would have been obvious at the time of invention to modify Koyama to incorporate the teachings of Kane, an initial stage of the turning on of the charging path used by the current source to charge the capacitor of the AMOLED pixel, providing a pre-charging signal to the current source to have the capacitor discharged, because it improves brightness uniformity by reducing current non-uniformities (col. 2, lines 10-13).

In regards to claim 2, Koyoma does not disclose a pre-charging signal that makes the capacitor to discharge to a pre-determined level.

Kane (Figures 3 and 4) discloses a pre-charging signal (pre-charge phase) that makes the capacitor (302) to discharge to a pre-determined level (col. 4, lines 31-34 and lines 54-56; the pre-charge pulse causes a charge to be stored at Node A, then

Data is written to the pixel of the previous row, which would then cause the capacitor to

discharge to what was applied to the Data line (pre-determined level)).

It would have been obvious at the time of invention to modify Koyama to

incorporate the teachings of Kane, a pre-charging signal that makes the capacitor to

discharge to a pre-determined level, because it improves brightness uniformity by

reducing current non-uniformities (col. 2, lines 10-13).

Response to Arguments

3.   Applicant's arguments with respect to claims 1 and 2 have been considered but

are moot in view of the new grounds of rejection.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The prior art (Li, US 6,756,741 and Yumoto, US 6,859,193) are

deemed relevant since they disclose updating a current value of a current source,

turning on a charging path used by the current source to charge a capacitor of the

AMOLED pixel, completing the charging of the capacitor and cutting off the charging

path used by the current source to charge the capacitor of the AMOLED pixel.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Pervan whose telephone number is (571) 272-

0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

MVP
Mar. 22, 2006

AMR A. AWAD
PRIMARY EXAMINER